

Application No. 10/000,127
Response dated October 14, 2004
Reply to Office Action of July 14, 2004

AMENDMENTS TO THE SPECIFICATION:

Please amend the Abstract as follows:

ABSTRACT OF THE DISCLOSURE

A modified vanadium compound ~~of the present invention~~ characterized in ~~[[such]]~~ that vanadium sulfate (III), or a mixed vanadium compound of vanadium sulfate (III) and vanadyl sulfate (IV) contains excessive sulfuric acid other than sulfate group composing the vanadium sulfate (III) or the vanadyl sulfate (IV), and when the modified vanadium compound is used, a redox flow battery electrolyte can be prepared easily.

Please amend the paragraph beginning at page 18, line 5 as follows:

In a second method of producing the modified vanadium compound of the present invention, at first vanadium sulfate (III) or a mixed vanadium compound of vanadium sulfate (III) and vanadyl sulfate (IV) is dissolved with a sulfuric acid solution so that a vanadium-contained solution is prepared. As for the vanadium-contained solution producing method, the vanadium sulfate (III) or the mixed vanadium compound is dissolved with a sulfate solution. Here, as the vanadium sulfate (III) or the mixed vanadium compound to be used for dissolving, forms of particles with large surface area, flake and the like are preferable.

Please amend the paragraph beginning at page 21, line 22 as follows:

The temperature of water to be used for dissolving the modified vanadium compound is not particularly limited, but the temperature may be selected suitably taking an apparatus or the like into consideration because when the temperature is 25°C, the solution time is within 20 minutes, when 40 °C, the time is within 10 minutes, and when 60 °C, the time is within 5 minutes.

Please amend the paragraph beginning at page 22, line 21 as follows:

In the case where the modified vanadium compound of the present invention contains only vanadium sulfate (III) as the vanadium compound, the modified vanadium compound is dissolved in water so that the blending amount falls within the above range, and a negative electrode electrolyte containing trivalent vanadium ion and sulfate ion can be obtained. Moreover, in the case where the modified vanadium compound of the present invention contains only vanadium sulfate (III) as the vanadium compound, the modified vanadium compound and a pentavalent vanadium compound are dissolved in water so that the density of the vanadium ion and the density of the sulfate ion fall within the above ranges. Thereafter, these compounds are agitated at a temperature of normally about 60 °C and are subject to redox reaction so that a tetravalent vanadium compound is obtained, thereby obtaining a positive electrode electrolyte of the redox flow battery electrode. Meanwhile, the modified vanadium compound of the present invention containing vanadium sulfate (III) and vanadyl sulfate (IV) is dissolved in water so that the density of vanadium ion and the density of sulfate ion fall within the above range, and as a result it can be

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used simultaneously as the positive electrode solution and the negative electrode solution. Particularly ratios vanadium sulfate (III) and vanadyl sulfate (IV) are contained in more equal mol, a difference in the density of ion connected in charging/discharging between the positive electrode solution and the negative electrode solution is eliminated. For this reason, this state is preferable from the viewpoint of the efficiency of charging/discharging.

Please amend the paragraph beginning at page 34, line 1 as follows:

~~Claims:~~ What is claimed is: